



Technical Report

Sustainable Intensification of Key Farming Systems in East and Southern Africa

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The Africa Research in Sustainable Intensification for the Next Generation (Africa RISING) program comprises three research-for-development (R4D) projects supported by the United States Agency for International Development (USAID) as part of the U.S. Government's Feed the Future (FtF) initiative.

Through action research and development (R&D) partnerships, Africa RISING will create opportunities for smallholder farm households to move out of hunger and poverty through sustainably intensified farming systems that improve food, nutrition, and income security, particularly for women and children, and conserve or enhance the natural resource base. The three projects are led by the International Institute of Tropical Agriculture (IITA) in West Africa and East and Southern Africa, and the International Livestock Research Institute (ILRI) in the Ethiopian Highlands. The International Food Policy Research Institute (IFPRI) leads an associated project on monitoring, evaluation, and impact assessment.



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Introduction

The United States Agency for International Development (USAID) is supporting multi-stakeholder agricultural research projects to sustainably intensify key African farming systems as part of the US Government's 'Feed the Future' (FtF) initiative to address global hunger and food security issues in sub-Saharan Africa (SSA). It is also a way of bringing regional focus to the CGIAR Research Programs (CRPs) on Integrated Systems, especially CRPs on Dryland Systems and Humidtropics.

Feed the Future-Tanzania focuses on reducing poverty and enhancing nutrition through key investments to improve availability and access to staple foods by enhancing the competitiveness of smallholders in rice, maize, and horticulture value chains; raising productivity through irrigation and rural roads; improving household nutrition; policy reforms; and developing national capacity for policy, planning and coordination, research and development, and monitoring and evaluation (US Government, 2010).

In Tanzania, the FtF investments are geographically focused in areas with high agricultural potential bordering chronically food insecure districts: Morogoro (rice); Manyara and Dodoma (maize); and Arusha, Kilimanjaro, Tanga, Zanzibar, Dar es Salaam, Morogoro, Iringa, and Mbeya (horticulture). Nutrition interventions are focused in areas with high chronic malnutrition such as Dodoma region. The FtF target areas are characterized by moderate to high levels of food insecurity and poverty but with high potential for growth due to proximity to transport corridors for market access and impact on nearby food insecure areas, lack of investment by other donors, good water resources and climatic conditions, opportunity for high impact on "productive" poor, prioritized by Government of Tanzania and private investors, and ability to achieve scalable high growth impact.

The International Institute of Tropical Agriculture (IITA) is the lead institute for developing and implementing the eastern and southern Africa project of the Africa RISING Program. This project primarily focuses on maize-legume and rice-vegetable based production systems in Tanzania, and maize-legume based systems in Malawi but is intended to result in spill-over effects to other similar agroecological zones in eastern and southern Africa.

The impact of the Africa RISING will be based on research in best management practices for sustainable intensification (SI) of agricultural production. This requires well-coordinated efforts involving multiple donors, regional organizations, partner universities, the private sector, national and international agricultural research institutes, and non-government organizations (NGOs).

Africa RISING is organized around 4 research outputs (RO) that are logically linked in time and space:

- 1: Situation Analysis and Program-wide Synthesis
- 2: Integrated Systems Improvement
- 3: Scaling and Delivery of Integrated Innovation
- 4: Integrated Monitoring and Evaluation

The Project started in October 2011 and is expected to be implemented over a total of five years.

This report gives highlights of some activities implemented during October 2012 to March 2013. Most were initiated during the previous reporting period but completed only later.

Summary of progress during the reporting period

1. Implementation of jumpstart projects

Africa RISING Program jumpstart or early-win projects were intended to prepare for partnership teams covering competencies necessary for conducting the program's integrated research, but also to produce some short-term outputs that would support the longer-term objectives of the program by informing its design and development of longer-term projects. They were not designed to continue during subsequent years of implementation.

Ten projects were supported in Tanzania, and all have been completed. Most of the projects were diagnostic in nature, utilizing available literature or conducting quick surveys to generate information in support of the study objectives. A review of the reports give the following output trends: (i) understanding major constraints (research entry opportunities) along the value chains, (ii) multiplication of new variety seeds for use in subsequent studies, (iii) inventory of on-the-shelf and current innovations that could be applied to improving farm level productivity, (iv) introduction and testing of new technologies and (v) creation of awareness and networking among stakeholders.

Understanding major production constraints

Projects on the value chain analyses for grain legumes and vegetables identified produce market availability but inadequate production to satisfy these markets. Table 1, for example, shows that the proportion of farmers (37%) intentionally producing beans with surplus for sale is much lower than that of farmers (67%) who actually sell beans, an indication for food grain insecurity in most homesteads. The potential market identified by the likely increase in local households consuming beans (40%) and the low proportion of exported beans (12%) is a driver for increased productivity. These projects identified constraints to increased productivity, and which could be addressed concurrently in the research phase, as being:

- Lack of quality and improved seed
- Lack of appropriate production technologies and knowledge among the farmers (no training)
- Low soil infertility and lack of fertilizers
- Lack of credit
- Limited labor availability
- Erratic weather patterns
- Pest and disease infestation especially the rain-fed crop
- Lack of market services
- Limited extension services
- High input costs

Table 1. Value chain analysis of beans in Malawi, Zambia, and Tanzania.

Market indicator	Country			Average
	Malawi	Zambia	Tanzania	
Proportion of farmers producing surplus for sale (%)	20	40	50	37
Proportion of farmers selling (%)	60	70	70	67
Households likely to increase beans consumption in future (%)	40	50	30	40
Current proportion of beans exported (%)	5	10	20	8

Addressing the seed issue

The constraints identified above are recurring, given that some of the jumpstart proposals already set to address some of them. Two such proposals were designed to (a) multiply breeder and certified seed of six crops - maize, cowpeas, soybeans, pigeonpea and groundnuts - to meet the needs for consequent on-farm evaluations and demonstrations, and (b) identify supply status, bottlenecks and strategies for improvement. Multiplying seed was a timing race against the rain season, and Table 2 indicates the achievements in seed multiplication. Seed multiplication is not a research issue but this calls for closer engagement with development partners, like NAFKA, to work with and encourage new seed production partners to accelerate availability of seed which is a primary input in intensified crop production programs.

Table 2. Quantities (kg) of seed produced by partner institutions. Varieties and country of production are not differentiated in these total amounts.

Crop	Seed type		
	Breeder	Basic	Certified
Beans	300	-	8000
Maize	2000	2000	-
Groundnuts	2800	3000	10000
Pigeonpea	2000	8000	20000
Soybean	100	-	-
Cowpea	-	80	300

Table 3 shows that scientists release more crop varieties than are disseminated and that attention to generate new varieties is limited in crops that may have more significant food and commercial value in the study countries. Pigeonpea is almost as widely grown as maize in the intercropping systems of Tanzania but hardly receives varietal development attention. The study identified that many farmers are not aware of improved varieties and access to the seed by those who are aware is very limited. Seed systems are very weak or non-existent

for some crops, especially the forage varieties. Is it, therefore, necessary for scientists to keep injecting new varieties in these production systems? Integrated seed systems were recommended as an action research for Africa RISING.

Table 3. Comparison of number of crop varieties released with those disseminated. Note the limited attention to some crops considered important in the Africa RISING action countries.

Crop	Number of varieties released 1996-2011		Number of varieties disseminated by 2011	
	Tanzania	Malawi	Tanzania	Malawi
Maize hybrid	45	154	3	74
Maize OPV	16	18	9	6
Beans	11	18	7	8
Groundnuts	5	8	?	2
Cowpea	1	2	?	2
Soybean	2	20	?	7
Pigeonpea	3	1	2	0

Inventory of innovations

Africa RISING assumes existence of on-the-shelf, indigenous and on-going innovations that would form combination components for new intensification innovations to be quantified and evaluated during the integrated systems improvement research phase. One jumpstart project was designed to catalogue existing crop, soil and water management innovations in Tanzania and Malawi, but records of other existing innovations are found in a number of other projects. The better documented innovations, some with accompanying training/learning materials, were identified as:

- Cereal-legume rotation and intercropping, the frequent legumes being soybeans, common beans and *Cajanus cajan*
- Use of synthetic fertilizers, especially nitrogen and phosphorus at given recommended rates
- Application of organic inputs, including crop residue incorporation, and use of compost, farmyard and green manures
- Combining synthetic and organic inputs
- Use of fertilizer trees and shrubs in alley cropping, hedgerow intercropping and improved fallows (e.g. Table 4, adapted from the jumpstart on evergreen agriculture)
- Conservation agriculture

Several initiatives put in place to enhance adoption of these innovations (including subsidy programs and national campaigns) resulted in mixed returns dependent upon the farmers' own driving motives including, but not limited to; (a) availability and affordability of inputs, (b) timely profit and food benefits accruing from the innovations, and (c) competition for limited resources (land, labor and finances). It is anticipated that household typologizing will identify these limitations and enable appropriate innovation targeting for improved adoption.

Table 4. Fertilizer trees significantly increase maize yields.

Tree species	Country	# of sites	Yield (t ha ⁻¹)	Yield increase (t ha ⁻¹)	Yield increase (%)
Gliricidia	Malawi	5	3.9	2.9	346
	Tanzania	2	2.3	0.8	56
	Zambia	4	2.8	1.8	350
Sesbania	Malawi	7	2.5	1.3	161
	Tanzania	2	1.2	0.7	171
	Zambia	9	3.2	2.2	480
Tephrosia	Malawi	9	2.0	1.1	233
	Tanzania	2	2.0	0.9	80
	Zambia	8	1.7	0.8	198

Introducing new physical technologies

Two projects introduced and initiated evaluations on new technologies. The jumpstart on post-harvest technologies and on weed management in rice systems introduced improved storage and weeding technologies (Plate 1) and trained artisans in the production and maintenance of some of the technologies (Plate 2). On farm tests showed that use of some of the improved grain storage technologies could reduce post-harvest losses to near zero over a six-month period, thus saving 25% of the farm produce (Figure 1). Rotary weeders reduced labor inputs by 50-64%. These technologies are ready for dissemination as such, but could also form entry points for adoption of other technologies that can be synergistically combined with them.

Awareness and capacity building

All the projects required engagement with partners at different levels to generate information presented in their reports either by conducting surveys or participatory testing of technologies. This necessitated community sensitization and promotion of the activities being undertaken. Some of the projects undertook direct capacity building for partners at different levels, ranging from farmer workshops to graduate training.

M = Metal silo alone
MA = Metal silo + Actellic
MP = Metal silo + Phostoxin

P = Farmers' bag
PA = Farmers' bag + Actellic
SGB = Super Grain Bag

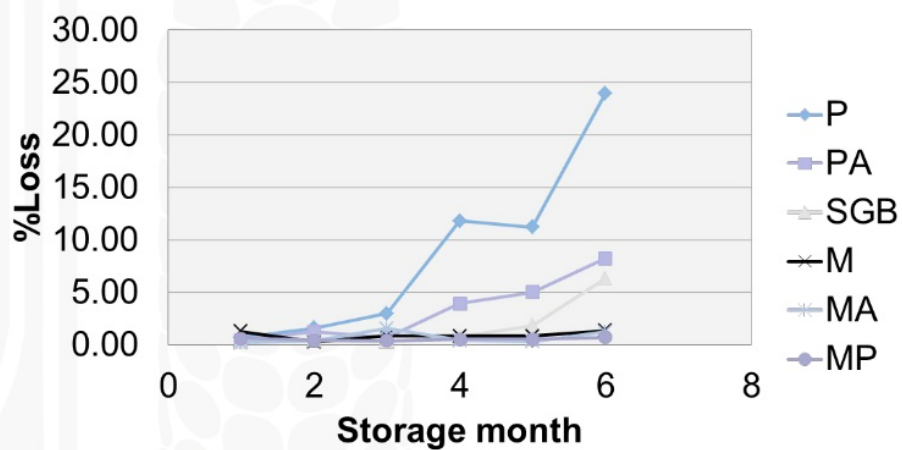


Figure 1. Comparison of improved postharvest technologies for promoting food storage nutrition in Tanzania.



Plate 1. On-farm testing of improved storage technologies (top) and rotary weeders (below).



Plate 2. Artisans training in the local production and maintenance of storage silos (left) and rotary weeders (right).

2. Site selection for longer-term research activities

Leading the site characterization and selection process has been a responsibility of IFPRI. The process started during the last reporting period and has been revised and refined before the beginning of the current planting season. The ideal situation was to stratify and characterize the Action Districts based on a review of available spatial biophysical and socio-economic data (Table 5) so as to understand the spatial pattern and homogeneity of each of the candidate data layers, choose the appropriate dataset for the stratification analysis, map to visualize their spatial distribution, aggregate by classes, and use these for target area stratification out of which potential action sites are proposed (randomly). Actual action sites would then be confirmed after IFPRI and site scientist(s) visits to ratify the stratification and taking physical limitations, such as accessibility, into consideration.

For the year 2012/13, this process was followed for the action sites in Babati, Kongwa, and Kiteto. Sites in Malawi and Kilombero were selected by the research teams with some guidance from IFPRI. The process is to be more rigorous with new sites progressively coming on board.

Selection of action districts in Tanzania was externally influenced, based mainly on host country interests as well as co-location with other USAID supported development activities. Figures 2 and 3 present the action villages and potential counterfactual sites at district level.

Table 5: Characteristics of the candidate data layers.

Datasets	Spatial resolution	Year	Source
Population density	1 sqkm	2000	CIESIN
Agro-Ecological Zones	~10sqkm		IIASA
Precipitation	50 sqkm	long term (> 50 years) average	CRU
	1 sqkm	long term (> 50 years) average	WorldClim
	100 sqkm	long term (> 50 years) average	NASA POWER
	50sqkm	long term (> 50 years) average	GPCC
	1sqkm	long term (1976-2008) average	interpolated from national weather station
Elevation	1 sqkm		USGS
Slope	1 sqkm		USGS
farming systems	shape file		John Dixon (2012 version)
Market access	1 sqkm	2000	HarvestChoice
Length of growth period	~10sqkm	long term (> 50 years) average	IIASA
Maize harvested area	~10sqkm	2000	HarvestChoice

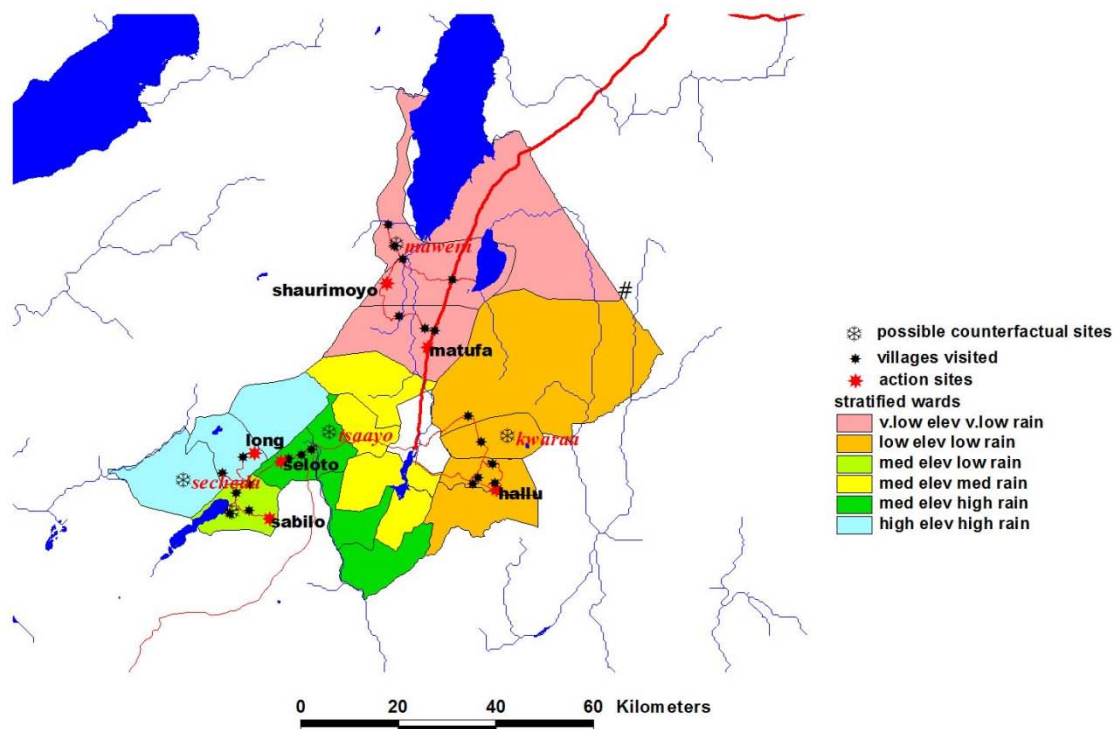


Figure 2: Action and potential control sites in Babati District, Tanzania. Currently, the project is implemented in Sabilo, Long, and Seloto. The others will be added next season.

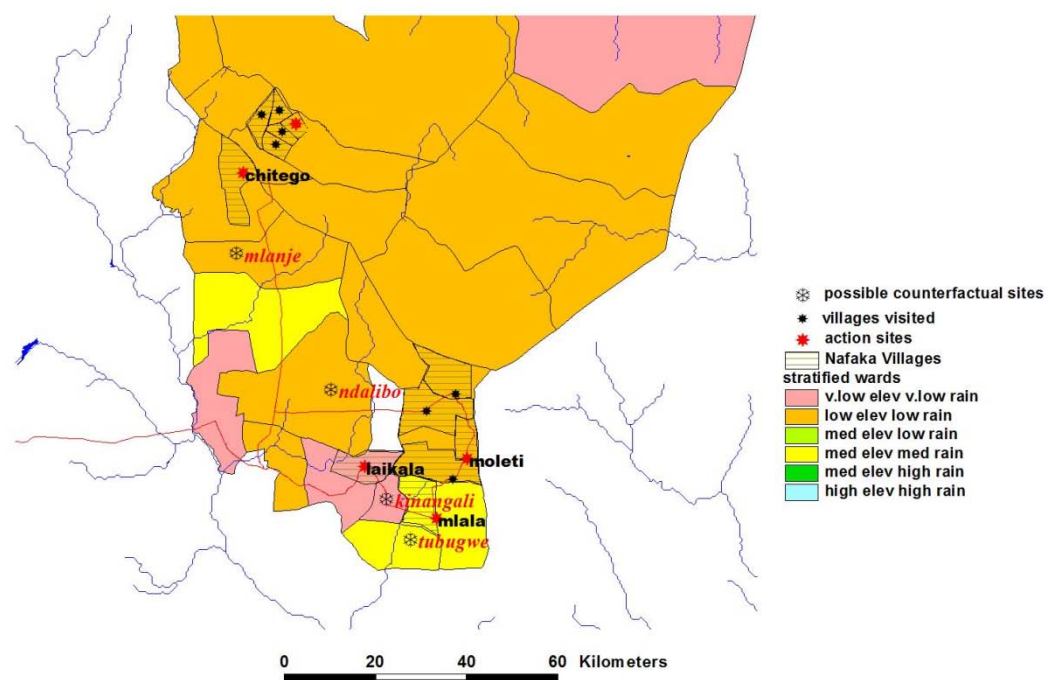


Figure 3: Action and potential control sites in Kongwa and Kiteto Districts, Tanzania. Note: name and exact location of one action site has yet to be confirmed. Laikala will be added next season.

In Malawi, the project is implemented in 3 agroecological zones (Table 6). The districts for were chosen to coincide with the districts in which the USAID Malawi country mission's Feed the Future initiatives are taking place. Dedza and Ntcheu were selected and actual intervention sites within the districts, locally referred to as Extension Planning Areas (EPAs) were selected principally based on (i) elevation and (ii) rainfall.

- Elevation was divided into three classes: (A) below 750 masl (B) 750 -1000 masl, and (C) >1000 masl. Elevation is known to be strongly linked to agro-ecological zonation in Malawi
- Rainfall was also divided into three classes (A) low (B) medium and (C) high. Final classification was obtained by combining rainfall and elevation layers were combined (Figure 3)
- An intervention site was then selected in the high rainfall, high elevation zone and in the low rainfall, low elevation zone, while two sites where selected in the medium elevation, medium rainfall zone
- Additional sites will be added one for the low elevation zone and the other for the high elevation zone to have six intervention sites during year 2.

Table 6: Action sites in three different agroecological zones in Malawi

District	Extension Planning Area (EPA)	Section	Agroecological zonation	Latitude	Longitude	Altitude (masl)
Dedza	Linthipe	Mposa	High rainfall, high elevation(cool climate)	14°12'21"S	34°05'58"E	1236
	Golomoti	Golomoti	Low rainfall, low elevation (hot climate)	14°26'19"S	34°36'14"E	554
Ntcheu	Kandeu	Kampanje	Medium rainfall, medium elevation (Sub-humid rainfall)	14°37'45"S	34°35'51"E	909
	Nsipe	Mpamadzi	Medium rainfall, medium elevation (Sub-humid rainfall)	14°55'47"S	34°44'47"E	863

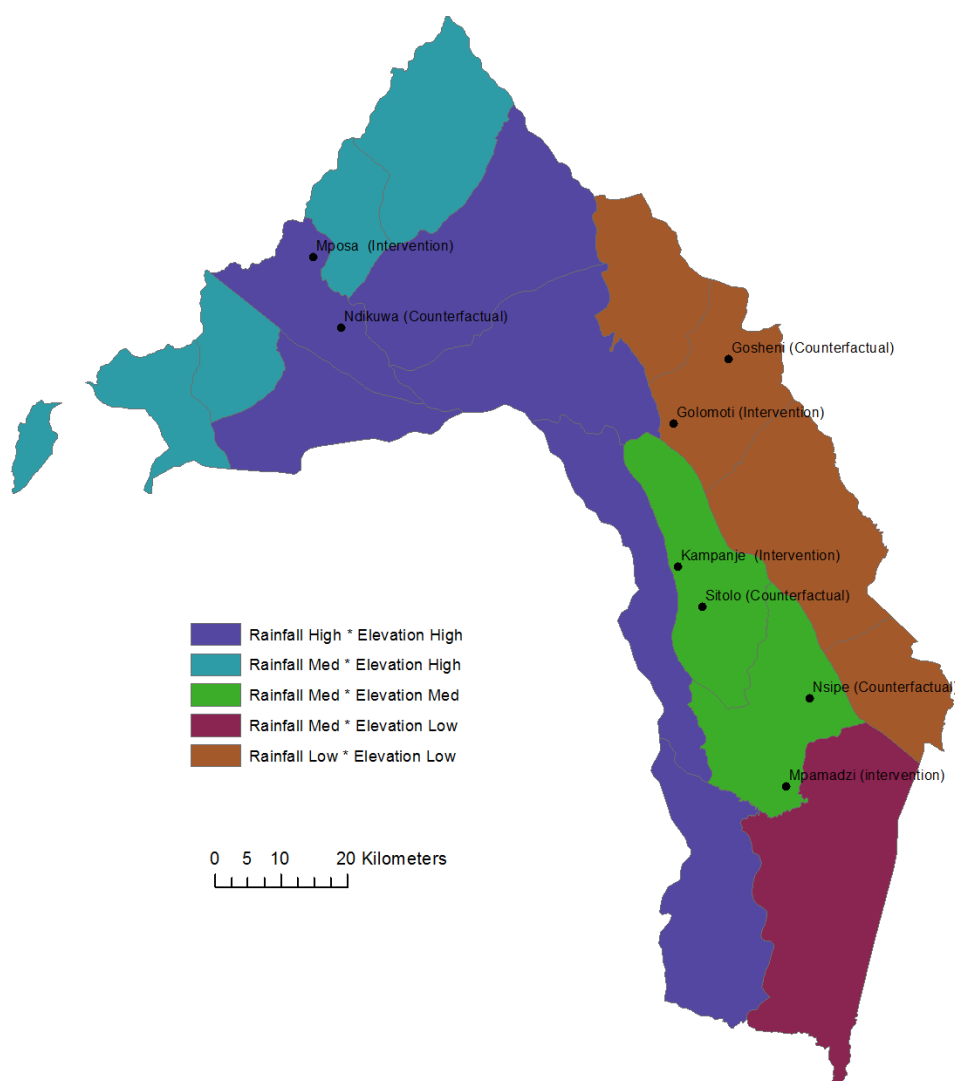


Figure 4: Rainfall and elevation classes at EPA level, Ntcheu and Dedza Districts, Malawi

3. Project meetings

Between 1 and 5 October 2012 an [annual review and planning workshop](#) was held in Arusha, Tanzania. The outcomes of year 1 were presented and discussed on day 1. For 2 days plans for year 2 were discussed. The meeting was combined with a one-day field trip to Babati district and followed by the first East and Southern [Africa Project Steering Committee](#) on 6 October. IFPRI met with partners from Tanzania and Malawi on 27-30 January in Dar es Salaam to discuss the [baseline survey instruments](#), with the aim of developing standardized Program RO1 and M&E data collection tools across ESA Project sites and disciplines. During the Program Coordination Team meeting on 25 January in Accra, Ghana, need arose to discuss in depth the research methodologies used by each project and the scales at which research is conducted. Therefore, a [program level meeting](#) was organized 6-8 March in Lilongwe, Malawi. Reports and notes from the meetings can be downloaded by following the indicated links.

4. Implementation of long-term project

The annual review and planning workshop for formulated guidelines for the development of research and workplans that were tasked upon research teams. The original consideration

was that research teams for Research Output 2 (RO2 – Integrated Systems Improvement) should be formed to address farming system typologies ranging from sole livestock systems through integrated crop/extensive livestock, crop/intensive livestock to sole cropping systems. Given that there was no baseline information to identify these typologies, teams were formed based on broad agro-ecologies as well as country basis, with the knowledge that the formed teams would consist disciplines that would address challenges of the identified typologies within the broader geographical zones. In consultation with staff from the IITA East Africa Hub, four research teams were formed as follows:

Team 1, led by IITA to address research of the sub-humid agroecology in Babati District, Tanzania

Team 2, led by ICRISAT to address research of the semi-arid agroecology in Kongwa and Kiteto Districts, Tanzania

Team 3, led by AfricaRice to address research in rice-based systems in the lowland areas of Kilombero District, Tanzania

Team 4, led by Michigan State University to address maize-legume-based systems in the districts of Ntcheu and Dedza, Malawi

These teams were commissioned to develop research proposals within a given timeline, co-opting other disciplinary scientists as necessary. The teams held proposal write-shops but final proposals were submitted for consideration somewhat later than anticipated. The proposals and corresponding budgets were approved by the Steering Committee.

The main research activities commenced during January 2013, some pre-financed by partners to allow for timely planting. Fortunately, the rainy season persisted for longer than usual which allowed successful installation of most activities. Regrettably, however, the withdrawal of AfricaRice from the partnership with Africa RISING has led to the other partners within Team 3 to engage Teams 1 and 2 with the purpose of integrating their research into the maize-legume-based systems.

In Babati, research activities include “step one” ground-truthing technologies (introduction of new food and feed crop varieties, identification of biophysical production constraints, identification of dominant crop pests and diseases, promotion of resource-use efficiency, identification of better special intercrop arrangements, and improved post-harvest handling technologies. Similar activities are being conducted in the semi-arid areas of Kongwa and Kiteto, but where landscape based technologies addressing soil and water conservation have also been introduced. As much as possible, these are conducted on same sites (“mother-baby” or NAFKA trial sites) to allow co-learning from the different disciplines and institutions. These will provide for “step two” entry points for integrating other improved practices.

In Malawi, technologies to diversify intensification (improved multipurpose legume and maize varieties, doubled-up legumes, and targeted fertilizers and manure) are being promoted through adaptive “baby” trials where action group farmers collectively participate during establishment of the “mother” trials, and choose a few treatments from for installing and managing on their own farms.

Researchers of University of Wageningen, The Netherlands, have formed another team to address the farming systems analysis of Research Output 1 (RO1 – Situation Analysis and Program-wide Synthesis). Their activities will include a rapid systems characterization exercise allowing the development of functional farm typologies, and a detailed farming systems description to allow a complete farming system diagnosis. This information will be synthesized and analyzed toward the exploration of system innovations and system re-

design, ready for testing and evaluation under R02. This process will start in April 2013 with training of enumerators and data collection in both countries.



Project farmer intercropping maize with climbing beans



Maize-pigeon pea intercrop in Babati



Groundnut "mother trial" in Kiteto near NAFKA site

5. Project staff and office

A local consultant was hired for the cropping season to assist the Babati research team in implementing their activities, mainly identification and selection of farmers and farmer organizations to work with, supervision of field data collection, fostering partnerships between researchers, development partners, and government institutions.

Additional space was rented from AVRDC and equipped to accommodate the M&E specialist and to allow team meetings in Arusha. All vehicles and motorcycles ordered have been received.

6. Project partners

In Tanzania, currently the following partners are involved in the project: ARI Hombolo, ARI Naliendele, CIAT, CIMMYT, District Agriculture and Livestock Development Offices (DALDO), Farmer Organizations, ICRAF, ICRISAT, IFPRI, IITA, ILRI, Institute of Resources Assessment (IRA), Ministry of Livestock, Minjingu Fertilizer Company, NAFKA-USAID, Nelson Mandela African Institute of Science and Technology (NM-AIST), PANNAR and SUBA-AGRO Seed Companies, Pasture Research Center Kongwa, Selian Agriculture Research Institute (SARI), Sokoine University of Agriculture (SUA), Tanzania Livestock Research Institute (TALIRI), University of Dodoma, Wageningen University.

In Malawi, the project is implemented by: Agriculture Development Division (ADD), Bunda College of Agriculture, CIAT, Concern Universal, Extension Planning Areas, Soils Food and Healthy Communities Project (SFHC), ICRAF, IFPRI, INVC-USAID, Lipangwe Organic Manure Demonstration Farm (LOMADEF), Michigan State University, Wageningen University, World Vision.

Lessons and implementing issues

a) In February 2013, AfricaRice decided to withdraw from both projects, in West Africa and Eastern/Southern Africa. Reasons given were incompatibility of Africa RISING M&E plans, implementation sites, research approach and reporting requirements with projects and procedures already in place at AfricaRice and agreed with their member countries. The interventions of the IITA Director General and Deputy Director General for Partnerships and Capacity Development could not prevent AfricaRice management from taking this decision. USAID informed IITA that discussions had taken place with AfricaRice but a way to overcome the basic differences could not be identified.

AfricaRice was the lead institution for research on rice-vegetable-based systems in Kilombero District in Tanzania, working together with AVRDC, IITA, NAFKA, and the Kilombero Agricultural Training and Research Institute (KATRIN). The withdrawal caused all activities in Kilombero to be stopped and forced the partners (AVRDC, IITA) to initiate the development of alternative research on vegetable integration in Babati, Kongwa, Kiteto. At the time of the completion of this report these plans have not yet been finalized. In view of the advanced growing season, it must be anticipated that only limited amount of work can still be implemented.

USAID suggested to AfricaRice to explore with the USAID country mission the possibility of collaborating in the longer-term with only NAFKA in Kilombero with financial support from the mission. Should the mission agree to such an arrangement, USAID will ask IITA to provide some transitional funds to AfricaRice for this season. Till date no information has been received.

The Steering Committee will have to decide on a replacement for AfricaRice on the committee.

The lesson to be learned from the AfricaRice decision is that new potential partners have to be carefully selected for their suitability and comparative advantages if a true partnership is to be built and the involvement is not to add a burden on either side.

b) Until end of the reporting period, IFPRI has not been successful in placing an M&E specialist in East/Southern Africa. However, the recruitment process has now been finalized and the expert has joined the Tanzania team in early May.

c) The baseline surveys in Tanzania and Malawi have not been carried out yet. This complicated the farming systems analysis which should have ideally been based on the baseline survey households. From the agronomists' perspective the results of the baseline surveys should have helped designing the field research for the current growing season, hence they should have been carried out well before November 2012. However, the IFPRI experts considered timing of the surveys immediately after harvest as the most appropriate for efficient baseline data collection because farmers have good memory of yields and other production parameters, and more time to dedicate to answering questions than before or during the growing season. IFPRI also considered a split survey with several visits would lead to farmers' fatigue and poor responsiveness. Since the survey instrument was not yet available, the site selection not finalized, and the local M&E expert not in place the baseline surveys could not be organized last year right after the harvesting period. The questionnaire also needed thorough discussions with the research teams to adapt it to their needs and to decide for each question the appropriateness of inclusion. The surveys are now scheduled for coming June/July. It is expected that preliminary results will be available in time to inform the next season's research plan.

d) Regarding the existing partnerships we are facing two different scenarios. With the anticipated inclusion of Zambia into Africa RISING it is likely that yet another scenario will emerge and will have to be managed.

The centralized arrangement in Malawi

The project design in Malawi was based on the research experiences and achievements by one institution, Michigan State University. This was recognized by USAID and, thus, MSU was identified as the main implementing partner in Malawi. In Africa RISING Program Document speak, it is like sustainable intensification options were already identified and were being combined, tested and presented for adoption. Partners were, therefore, invited to contribute technically (e.g. ICRAF was to conduct training; CIAT to provide seeds, etc.) rather than allowing their in-depth involvement to introduce and test disciplinary ideas and technology experiences. One advantage to this arrangement is that research implementation being one institute-driven becomes easier to manage. The disadvantages are that (i) it is not motivational to partners and the presence and authority of partners is not strong, and (ii) it is limited in scope in terms of the value chain (inputs, production, processing, marketing) and crop- livestock integration. There is need to correct this at the next planning meeting, to allow for more partner inclusiveness and ownership.

The decentralized arrangement in Tanzania

The project designs in Tanzania allowed each partners contribute their ideas and technologies based on identified challenges (at the planning meeting and from institutional archives) and implement them on same sites as a means of sharing experiences and allowing multi-discipline identification of the best-bet "disciplinary technologies" that may be combined in subsequent seasons. In Africa RISING Program Document speak, it is like disciplines were presenting and testing multiple-source disciplinary practices that will allow their adaptation singly or in their more effective combinations. Technically, one may consider that the Tanzania designs are a step behind that of Malawi, but the consequent combined technologies will be a result of multi-institutional contributions. They present more options at value chain level and in terms of crop-livestock integration. Multi-institutional presence here is strong, but this presents a new learning in managing the research, both in design and institutional

cohesion. A “Malawi situation” is expected in subsequent phases; when technology combinations (integration) have been agreed and subsequent roles and responsibilities of partners are defined for the longer-term. Team spirit and ownership will prevail.

The Zambia arrangement

The approach being taken in organizing the preparatory meetings presents a third scenario; it is a SIMLEZA vs Africa RISING partnership. SIMLEZA already has its own partnership team arrangements and the meeting arrangements we are going through give an impression like the SIMLEZA team will take action to develop research activities with the Africa RISING team. However, there is no Africa RISING team in Zambia. During the exploration and planning meeting in May with the SIMLEZA project, we should clarify that we are considering SIMLEZA to be the Zambian Africa RISING core team that will call upon other partners (beyond the current SIMLEZA team) to bring in more disciplinary contributions and “expand their mandate” toward the Africa RISING concept of integration. Some of the additional partners may be those that are already conducting Africa RISING research in Tanzania or Malawi.

Special events

On the occasion of the workshop in Malawi in March Jerry Glover and Tracy Powel from USAID Bureau for Food Security visited some of the Malawi project sites in the three different agroecological zones. The field trip was organized by Michigan State University, main implementer of the East and Southern Africa project component in Malawi. It coincided with a visit of a high level delegation from Michigan State University to Malawi. This delegation accompanied the Africa RISING team on the first day of the field trip.

While in Malawi, the Africa RISING team also visited the USAID country mission for a briefing on Africa RISING activities. The Deputy Team Leader Sustainable Economic Growth at the mission, John Edgar, expressed his desire of Africa RISING providing the mission funded project on Integrated Nutrition and Value Chains (INVC) with agronomic expertise. It was decided that communication between both projects will be coordinated. A Memorandum of Understanding between the two is under preparation. As a follow up to this discussion, [John Edgar visited Africa RISING experiments](#) in Linthipe, Dedza, on 18 March.



Malawi field visit 4-5 March 2013. “Mother-trial” in Linthipe EPA (left) and discussion with farmers in Nsipe EPA (right)

In continuation of the field visits and workshop and in Malawi, the Project Coordinator, the ESA Chief Scientist, and an IFPRI M&E specialist, accompanied the donor representatives on a field visit in Eastern Province of Zambia to meet with SIMLEZA project management and implementers. The delegation was joined by a representative of the USAID mission in Zambia and the IITA Deputy Director General for Research.

The reason behind this trip was to learn about SIMLEZA activities and discuss with colleagues opportunities of Africa RISING collaborating with SIMLEZA in this Province as both projects are funded by USAID. As reported during the Steering Committee meeting, SIMLEZA is facing funding problems and close collaboration with Africa RISING could avoid any interruption of activities. In addition, it is expected that Africa RISING's farming systems research approach could add value to SIMLEZA, while the SIMLEZA sites would add another research location to Africa RISING thus broadening its research base. Thorough site characterization will reveal whether the existing SIMLEZA sites would also represent an additional agroecology for Africa RISING.

At a first glance, both projects have a lot in common (sustainable intensification of maize-legume based farming systems) but approaches seem to be different, with SIMLEZA also having a strong development component through a village based seed multiplication initiative. Since details could not be explored during the two day visit, it was agreed that project documents would be exchanged and a follow-up meeting held in May.



AFRICA RISING team meeting with farmers participating in SIMLEZA field research in Eastern Province of Zambia